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SOUTHERN COMPANY

May 30, 2014

Docket No: 50-425

NL-14-0809

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Vogtle Electric Generating Plant – Unit 2
Licensee Event Report 2014-001-00
Automatic Reactor Trip Due To Low Steam Generator Level

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Southern Nuclear Operating Company (SNC) is submitting the enclosed Licensee Event Report, 2-2014-001. This letter contains no NRC commitments. If you have any questions, please contact Kevin Walden at (706) 848-4290.

Respectfully submitted,

Tom E. Tynan
Site Vice President - Vogtle

TET/KCW

Enclosure: Unit 2 Licensee Event Report 2014-001-00

cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. T. E. Tynan, Vice President – Vogtle 1 & 2
Mr. B. L. Ivey, Vice President – Regulatory Affairs
Mr. D. R. Madison, Vice President – Fleet Operations
Mr. B. J. Adams, Vice President – Engineering
Mr. S. C. Waldrup, Regulatory Affairs Manager – Vogtle
Mrs. M. A. Cline, Operating Experience Coordinator – Vogtle
RType: CVC7000

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Regional Administrator
Mr. R. E. Martin, NRR Senior Project Manager -Vogtle
Mr. L. M. Cain, Senior Resident Inspector -Vogtle

Vogtle Electric Generating Plant – Unit 2
Licensee Event Report 2014-001-00
Automatic Reactor Trip do to Steam Generator Low Level

Enclosure

Unit 2 Licensee Event Report 2014-001-00

NRC FORM 366 (02-2014) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 01/31/2017

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE

Automatic Reactor Trip Due To Low Steam Generator Level

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	
04	08	2014	2014	- 001	- 00	05	30	2014	FACILITY NAME N/A	DOCKET NUMBER

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
1	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
100	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Vogtle Electric Generating Plant, Kevin Walden, Licensing Engineer	706-826-4290

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	SJ	JB	Ovation	Y					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO				

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On April 8, 2014 at approximately 04:30 Eastern Standard Time, Vogtle Unit 2 was operating at Mode 1 at 100 percent power when Unit 2 received a Steam Generator 3 narrow range low-low level automatic Reactor Protection System actuation as a result of the Loop 3 Main Feedwater Regulating Valve failing closed. The RPS actuation resulted in a trip of the turbine-generator. All rods fully inserted into the core, the Main Feedwater Isolation system and the Auxiliary Feedwater system automatically actuated as expected. The plant was stabilized in Mode 3 and the decay heat was discharged to the condenser. The cause of the event was a failure of the Steam Generator 3 Main Feed Regulator Valve control system.

The safety significance of the event is very low. Unit 1 was not affected and there were no adverse effects on the health and safety of the public.

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NARRATIVE

A. REQUIREMENT FOR REPORT

This report is required per 10CFR 50.73(a)(2)(iv)(A) due to an unplanned automatic actuation of the Reactor Protection System (RPS) and automatic actuation of the Auxiliary Feedwater System (AFW) and Feedwater Isolation (FWI) Engineered Safety Features Actuation Systems (ESFAS).

B. UNIT STATUS AT TIME OF EVENT

Mode 1, 100 percent power

C. DESCRIPTION OF EVENT

While operating at 100 percent power, Unit 2 experienced a low-low level alarm in Steam Generator 3. This resulted in an automatic RPS actuation due to low-low level in Steam Generator 3. AFW actuated and Main Feedwater isolated following the RPS actuation, as expected. All rods inserted and the plant was stabilized in Mode 3. Decay Heat was discharged to the condenser and no complications were experienced during the trip as all systems responded as designed.

The source of the water intrusion into the primary MFRV positioner was the result of a small leak (3 drops per minute) approximately eighteen feet above the positioner conduit. The collection area of the water was not immediately identified and as a result of less than adequate installation of the flex conduit, water accumulated inside the positioner housing. Over time, the accumulation of water inside the positioner housing reached a level resulting in an electrical short circuit of the primary MFRV positioner. This resulted in erroneous feedback from the primary positioner to the digital control system. This condition existed until the Loop 3 MFRV suddenly closed.

D. CAUSE OF EVENT

The cause of the event was failure to maintain installation standards of non-safety related conduit for the MFRV digital control system resulting in primary positioner water intrusion.

E. SAFETY ASSESSMENT

When the reactor tripped, all rods fully inserted. As a result of the trip, a FWI occurred and the AFW system actuated as designed. The unit was stabilized in Mode 3 at normal temperature and pressure. Because the plant responded as designed and there were no complications with plant shutdown, there was no adverse effect on plant safety or the health and safety of the public.

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NARRATIVE

F. CORRECTIVE ACTION

Immediate interim action to inspect and seal the flex conduit to the remaining MFRV positioners was completed for both Unit 1 and Unit 2. Quality Control inspections will be required for conduit installation on critical components to ensure design and installation standards are maintained.

G. ADDITIONAL INFORMATION

1) Failed Components:

MFRV Primary Positioner

2) Previous Similar Events:

IER 13-14-12 "Water Intrusion into Relay Box Causes Main Feedwater Isolation Valve Closure and Manual Scram"

3) Energy Industry Identification System Code:

[JB] -Feedwater/Steam Generator Water Level Control System
[JC] -Reactor Protection System
[BA] -Auxiliary Feedwater System